

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 May 2006 (11.05.2006)

PCT

(10) International Publication Number
WO 2006/049323 A1

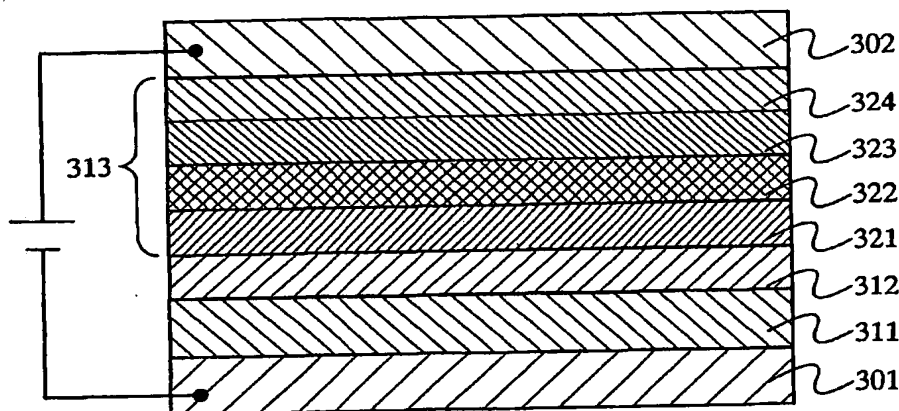
- (51) International Patent Classification:
H01L 51/50 (2006.01) *H01L 27/32* (2006.01)
G09F 9/30 (2006.01)
- (21) International Application Number:
PCT/JP2005/020663
- (22) International Filing Date:
4 November 2005 (04.11.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
2004-322995 5 November 2004 (05.11.2004) JP
- (71) Applicant (for all designated States except US): SEMI-CONDUCTOR ENERGY LABORATORY CO., LTD. [JP/JP]; 398, Hase, Atsugi-shi, Kanagawa, 2430036 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): KUMAKI, Daisuke. SEO, Satoshi [JP/JP]; c/o SEMICONDUCTOR ENERGY LABORATORY CO., LTD., 398, Hase, Atsugi-shi, Kanagawa, 2430036 (JP).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LIGHT-EMITTING ELEMENT AND LIGHT EMITTING DEVICE USING THE SAME



(57) Abstract: The present invention provides a light-emitting element having less increase in driving voltage with the accumulation of light-emission time, and provides a light-emitting element having less increase in resistance value with the increase in film thickness. A light-emitting element includes a first layer, a second layer and a third layer between a first electrode and a second electrode. The first layer is provided to be closer to the first electrode than the second layer, and the third layer is provided to be closer to the second electrode than the second layer. The first layer is a layer including an aromatic amine compound and a substance showing an electron accepting property to the aromatic amine compound. The second layer includes a substance of which an electron transporting property is stronger than a hole transporting property, and a substance showing an electron donating property to the aforementioned substance.